

REMARKS/ARGUMENTS

Support for the amendment to paragraph [0016] at specification page 6 is supported by, e.g., original Claim 3 and specification page 9, paragraph [0026], last sentence. For the polyorganosiloxane segment to be a polydimethylsiloxane all of R⁵ to R⁸ (i.e., R⁵, R⁶, R⁷, and R⁸) are methyl. Support for the amendment to Claim 1 is found in original Claim 4. The amendments to Claims 4, 5, 6 and 7 are supported by the claim as originally filed. New Claim 10 is supported by original Claim 4. New Claim 11 is supported at specification page 5, middle. New Claims 12 and 13 are supported at specification page 9, paragraph [0026]. New Claim 14 is supported by the section of the specification bridging pages 5-6. New Claim 15 is supported by the section of the specification bridging pages 9-10. New Claim 16 is supported by original Claim 1, by page 11, paragraph [0035] and page 13, paragraph [0037]. New Claim 17 is supported by the paragraph bridging specification pages 12-13. New Claim 18 is supported by original Claim 4. New Claim 19 is supported by Claim 17. Finally, new Claim 20 is supported by original Claim 3. No new matter has been entered.

In addition to pointing out certain preferred embodiments of the present invention in the newly presented claims, Applicants have amended Claim 1 to require that the fatty acid polyester component be selected from the group consisting of polylactic acid and a copolymer of hydroxycarboxylic acid and lactic acid. As pointed out in both the specification and several demonstrative Examples, this particularly claimed polycarbonate resin composition provides excellent fluidity and flame retardance.

The rejection of Claims 1-9 as obvious over Gupta and Babb is traversed. Gupta relates to polymer nanocomposites and methods for their preparation where an untreated phyllosilicate, other additives, and a polyorganosiloxane-polycarbonate copolymer are combined. The copolymers are described beginning at paragraph [0035] of the reference. However, nowhere in Gupta is there a recitation of Applicants' presently claimed component

(B) fatty acid polyester selected from the group consisting of polylactic acid and a copolymer of hydroxycarboxylic acid and lactic acid. While paragraph [0034] of Gupta suggests that the polyorganosiloxane-polycarbonate copolymers can be admixed with a variety of other thermoplastic or thermoset polymers, this broad suggestion is insufficient, even in view of Babb, to lead one of ordinary skill in the art to the claimed combination of polycarbonate component (A) and fatty acid polyester component (B) selected from the group consisting of polylactic acid and a copolymer of hydroxycarboxylic acid and lactic acid.

Specifically, Babb relates the rheology modification of polymers by coupling different polymers with an azide. Babb is thus unrelated to Gupta, but appears to be cited as evidence that polylactic acid exists (see column 4, line 14 of the reference).

Of course, Applicants are not claiming to have invented polylactic acid. Instead, what they have invented is a polycarbonate resin composition comprising a polycarbonate component (A) and 5-100 mass parts of a fatty acid polyester component selected from the group consisting of polylactic acid and a copolymer of hydroxycarboxylic acid and lactic acid. This claimed composition provides excellent fluidity and flame retardancy, as shown in Table 1-1 at specification page 22:

TABLE 1-1

Blending Ratio	(A)	(a-1)	Example						
			1	2	3	4	5	6	7
	(a-2)	PC-1 (mass part)	37	22	22	89	89	89	100
		PC-2 (mass part)	63	78	78	11	11	11	0
	(B)	PLA (mass part)	5.3	11	11	11	11	11	100
	(C)	Talc (mass part)	5.3	11	11	0	11	11	40
	(D)	Metal salt (mass part)	0	0.1	0	0	0	0	0
		Phosphate ester (mass part)	0	0	15	0	0	0	0
	(E)	PTFE (mass part)	0.32	0.32	0.32	0.32	0	0.32	0.6

TABLE 1-1-continued

Rating	Fluidity	SFL (260° C., 2 mm thickness) (cm)	Example						
			1	2	3	4	5	6	7
		22	30	60	26	30	30	30	70
	Flame retardancy	1.5 mm (UL94)	V-1	V-1	V-0	V-2	V-2	V-1	—
		3.0 mm (UL94)	V-0	V-1	V-0	V-2	V-2	V-0	V-2

where component (B) (PLA) is polylactic acid (see specification page 21, lines 5-6). The results in this Table, all using weight percentages within the presently claimed range of 5-100 mass parts, is to be contrasted with those results presented in Table 1-2, particularly Comparative Examples 2 and 4, where all three presently claimed components are present, but were in the polylactic acid component is present in the amounts outside those presently claimed:

TABLE 1-2

		Comparative Example				
		1	2	3	4	
Blending Ratio	(A) (a-1)	PC-1 (mass part)	0	35	0	67
	(a-2)	PC-2 (mass part)	100	65	100	33
	(B)	PLA (mass part)	0	1	11	122
	(C)	Talc (mass part)	0	5.1	0	0
	(D)	Metal salt (mass part)	0	0	0	0
		Phosphate ester (mass part)	0	0	0	0
	(E)	PTFE (mass part)	0.3	0.3	0.33	0
	Fluidity	SFL(260° C., 2 mm thickness) (cm)	18	18	26	80
	Flame retardancy	1.5 mm(UL94) 3.0 mm(UL94)	V-2 V-2	V-1 V-1	— V-2out	— V-2out

As shown in these Tables, both the fluidity and flame retardancy results are significantly worse when the polylactic acid is present in amounts outside the presently claimed range, as explained in the present specification itself at page 23:

[0161] (2) For Comparative Examples 1 and 2, their fluidity improving effect was low when the amount of addition of polylactic acid was equal to or less than 1 mass parts for 100 mass parts of the component (A).

[0162] (3) For Comparative Examples 3, the flame retardancy was poor when PC-1 of component (a-1) was not used.

[0163] (4) For Comparative Examples 4, the flame retardancy was deteriorated when the amount of addition of polylactic acid of the component (B) was 122 mass parts for 100 mass parts of the component (A).

Thus, while there is no reason to combine Gupta with Babb, even if one were to base the rejection on Gupta and the fact that polylactic acid exists, nothing in Gupta (or Babb) would have led one of ordinary skill in the art to the presently claimed composition or the presently claimed weight limitations, nor would these references have predicted the variation

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in fluidity and flame retardancy based upon the amount of component (B) present, as shown.

Accordingly, the rejection of the amended claims over Gupta and Babb should be withdrawn.

Finally, there are two outstanding provisional obviousness-type double patenting rejections.¹ Because the claims herein have been amended such that this first-filed application is now in condition for allowance, this application should be passed to Issue and any double patenting rejections should be carried over into the later-filed co-pending applications where appropriate.

If any final issues arise, the Examiner is requested to telephone the undersigned.

An early Notice of Allowance is earnestly solicited.

Respectfully submitted,

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¹ The IDS noting Serial No. 11/720,935 was intended to bring the existence of this application and its prosecution history to the attention of the Examiner.